31 March 2005

Final Technical Report
NASA Award number: NAG5-9334
Title: Role of the Polar Oceans in Global Climate
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End date: 08/31/2003

The project focused on ice-ocean model development and in particular on the assimilation of ice motion data and ice concentration data into both regional and global models. Many of the resulting publications below deal with improvements made in the physics treated by the model and the procedures for assimilating data. Several papers examine how the ability of the model to simulate the past behavior of the ice cover, especially to represent the ice thickness and ice deformation, is improved by data assimilation.

A second aspect of the work involved interpretation of modeled behavior. Resulting papers treat the decline of arctic ice thickness over the last thirty years, and how that decline was caused by a slight warming of the near-surface atmosphere, and also how large variation in ice thickness are due to changes in wind patterns associated with a well-known oscillation of the atmospheric circulation.

The research resulted in over 20 published papers on these topics.

Publications supported by this grant:

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